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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,754	09/22/2004	Donal O'Shea	131442-00001	8300

7590 10/17/2006

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444 West Michigan Avenue
Kalamazoo, MI 49007

EXAMINER

GRAZIER, NYEEMAH

ART UNIT	PAPER NUMBER
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1626

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/508,754

Applicant(s)

O'SHEA ET AL.

Examiner

Nyeemah Grazier

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27,31 and 37-69 is/are pending in the application.
- 4a) Of the above claim(s) 31 and 58-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27,37-39,43,47-50 and 54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION
FINAL REJECTION

I. ACTION SUMMARY

The Amendments to the Claims and Remarks submitted to the Office on August 1, 2006 has been fully considered and will be the basis of the following Action. Claims 27, 31, 37-69 are pending. Claims 1-26, 28-30, 32-36 have been cancelled. Claims 31, 58-69 are withdrawn.

II. RESPONSE TO AMENDMENTS

A. Rejoinder

Applicant's arguments, see Remarks, filed August 1, 2006, with respect to rejoinder of method claims if the products claims are in condition for allowance have been fully considered. As stated in the previous action, the method claims may be rejoined commensurate in scope with the allowable subject matter upon determining that the products are allowable.

B. Objection

Applicant's arguments, see Remarks, filed August 1, 2006, with respect to the objection to the specification for failing to include a description of the drawings have been fully considered and is persuasive. The objection has been *obviated*.

C. 35 USC §102 Rejection

Applicant's arguments, see Remarks, filed on August 1, 2006, with respect to the 102 Rejection have been fully considered and are persuasive in light of the Amendments to the claims. Thus, the rejection of claims 27 and 28 have been *obviated*.

D. 35 U.S.C.103, 2nd Rejection

Applicant's arguments, see Remarks, filed August 1, 2006, with respect to the 103 Rejection have been fully considered and are not persuasive even in light of the Amendments to the claims because the instant amended claims recite that R2 and R5 may represent "a heavy atom." The term heavy atom has been defined in the instant Specification as including halogen. Brinkley et al., suggest that R2 and R5 may represent halogen atoms. See Brinkley et al., col. 8, ll. 40-54, for example. Absent a declaration asserting unexpected results, the invention is rendered obvious. Thus, the rejection is ***maintained***.

III. REJECTION

Applicant's amendment necessitated the new ground of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

35 USC § 103 - OBVIOUSNESS REJECTION

The following is a quotation of 35 U.S.C. § 103(a) that forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Graham v. John Deere Co. set forth the factual inquiries necessary to determine obviousness under 35 U.S.C. §103(a). *See Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Specifically, the analysis must employ the following factual inquiries:

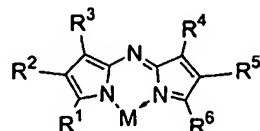
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 27, 37-39, 43, 47, 48-50, and 54 are rejected under 35 U.S.C. 103(a) as being obvious over *Brinkley, et al.*, US 5,326,692 (July 5, 1994) (WO 93/23492 A1).

The instant invention is drawn to compositions useful as *photodynamic therapeutic agents*, which are used as a technique for treating tumors. The products of the instant invention are represented by the formula below where M is a chelating agent and R₁-R₆ are selected from the group H, cyclic moiety, heteroaryl moiety, optionally substituted straight or branched chain

Art Unit: 1626

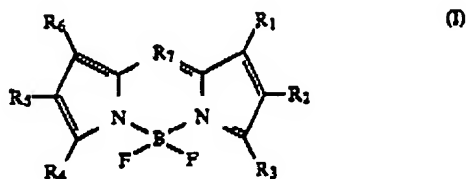
alkyl or acyl. In addition R^2 and R^5 can be a heavy atom. The variable "M" is preferably BX_2 where X can be halide.



The Scope and Content of the Prior Art (MPEP §2141.01)

Brinkley et al.

Brinkley, et al. teaches microparticles which are labeled with fluorescent dyes such as polyazaindacene compounds. (*Brinkley, et al.*, 5,326,692, col. 1, ll. 1-17). The invention is drawn to the formula (I) below where R_1 - R_6 may be the same or different and are selected from the group H, halogen, alkyl, alkoxy, alkenyl, cycloalkyl, arylalkyl, acyl or aryl, heteroaryl. (*Id.* at col. 8, ll. 32-54).



The Difference Between the Prior Art and the Claims (MPEP §2141.02)

The difference between *Brinkley, et al.* and the instant invention is in scope. The prior art reference teaches a generic formula (a) while the instant invention is drawn specifically to azapyrromethene boron complex. Additionally the instant application is drawn to compositions comprising the compound at issue while the prior art is drawn to the compound, compositions and methods of use.

Resolving Level of Ordinary Skill in the Pertinent Art

The pertinent art is photodynamic therapy. Photodynamic therapy (PDT) is a method using photodynamic therapeutic agents (e.g. compositions) for treating tumor tissue wherein the compound has photosensitizing properties. (Specification, p. 1, ll. 8-15). PDT is also applicable in “certain non-neoplastic diseases.” *Id.*

Prima Facie Obviousness-The Rational and Motivation (MPEP §2142-2413)

The motivation to make claimed compound derives from the expectation that structurally similar compounds are generally expected to have similar properties and have similar utilities. In re Gyurik, 596 F. 2d 1012, 201 USPQ 552 (CCPA 1979). Furthermore it is obvious to add a carrier to a known or obvious compound where the known or obvious compound has known utility. *See, Ex parte Douros*, 163 U.S.P.Q. 667 (PTOBAI 1968). Additionally, a prima facie case for obviousness is also derived from the utility of the art and the instant inventions. Both the instant invention and the prior art of record are used as photodynamic therapeutic agents. *Brinkley et al.* also uses similar utility as the compounds are useful fluorescent activity.

IV. OBJECTION

Dependent Claims 37-57 are also objected to as being dependent upon a rejected based claim.

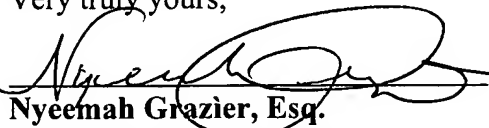
V. CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nyeemah Grazier whose telephone number is (571) 272-8781. The examiner can normally be reached on Monday through Thursday and every other Friday from 8:30 a.m. - 6:00 p.m.

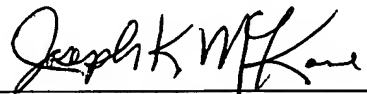
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. M^sKane, can be reached on (571) 272 - 0699. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Very truly yours,



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